

Original Research

Preventing dog bites in children: randomized controlled trial of an educational intervention

Dog bites are a major cause of injury, particularly in children.^{1,2} Guidelines on prevention are generally unevaluated and include controlling high-risk breeds, keeping dogs on a leash, animal training, and educating dog owners.^{3,4} However, no evaluations have been done of interventions designed to teach people how to avoid being attacked by a dog.

"Prevent-a-Bite" is an educational program designed for primary school children.⁵ The program aims to instil precautionary behavior around dogs, assuming that this might reduce the incidence of attacks. A randomized controlled trial of the efficacy of the intervention was conducted in Australian children aged 7 to 8 years who were presented with an unsupervised opportunity to approach a strange dog.



PARTICIPANTS, METHODS, AND RESULTS

Eight primary schools in metropolitan Sydney were randomly selected to participate in the trial, and all agreed to do so. The schools were cluster randomized into intervention and nonintervention control schools (4 in each group), and 2 classes in each school were then selected to participate. Altogether, 346 children aged 7 to 8 years took part. The study was approved by the human ethics committee of the University of Sydney.

The intervention consisted of a 30-minute lesson conducted by an accredited dog handler. The handler and dog demonstrated various "do's" and "don'ts" of behavior around dogs, such as how to recognize friendly, angry, or frightened dogs and how children should approach dogs and owners when they wanted to pat a dog. Children practiced petting the dog in the correct manner—asking

permission, approaching slowly, extending the hand palm down, petting the dog under the chin and on the chest, avoiding eye contact, and walking away slowly and quietly—and precautionary and protective body posture to adopt when approached or knocked over by a dog. They were also told when not to disturb even a friendly, known dog (for example, when it is sleeping, eating, tied up, or in a car). A resource kit for teachers, which included activities to be undertaken before and after the demonstration, was also distributed.

Seven to 10 days after participating in the program, children in the intervention schools were allowed to play unsupervised in the school grounds. A docile Labrador dog was tethered 5 m (about 16 ft) away from its owner, who was disguised as a tradesperson. The children were not told that the dog was there and were videotaped by a hidden camera for 10 minutes. Children in control schools who had not received the intervention were let out to play in similar circumstances.

The number of children who breached the proscribed behaviors was tallied from the videotape by 3 of us, 1 of whom was blind to the intervention or control status of each school. When the 3 reviewers differed in their scoring of whether an approach to the dog should be recorded as a breach of the guidelines, the videotape was reconsidered and the behavior scored as a breach only if all observers agreed.

Children who had received the intervention displayed appreciably greater precautionary behavior than children in the control schools (table). They were circumspect, typically observing the dog from a distance. Most of the

Petting of dogs in intervention and control schools

School	No. of children	No. (%) who petted
Control		
1 (mixed)	37	19 (51)
2 (girls)	31	19 (61)
3 (boys)	42	41 (98)
4 (boys)	39	39 (100)
Total	149	118 (79)
Intervention		
5 (mixed)	47	8 (17)
6 (mixed)	55	1 (2)
7 (mixed)	36	2 (6)
8 (mixed)	59	7 (12)
Total	197	18 (9)*

* $\chi^2_1 = 212.30$; $P > 0.001$ for intervention versus control schools.

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J C, J R, and L S are paid consultants to the Delta Society of Australia. S C has been paid an honorarium and travel expenses for speaking at a meeting about the intervention.

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children in the control group (118 [79%] of 149) petted the dog without hesitation and tried to excite it, but only a few (18 [9%] of 197) of the children who had received the intervention petted the dog, and they did this surreptitiously or only after a considerable period of careful assessment.

COMMENT

The Prevent-a-Bite educational intervention increased appreciably the precautionary behavior of young children around strange dogs in the short term. Further research is needed to determine whether the program is able to influence children's behavior in the longer term, whether "booster" interventions can help sustain this behavior, observations in contexts outside school would show a similar magnitude of effect, and wide adoption of the program would reduce the number of children bitten by dogs.

S C designed the study, analyzed the video record, wrote the first draft, and is guarantor. J C convened the group who planned and conducted the trial and contributed comments on the paper. J R conducted the intervention, analyzed the video record, and helped write the paper. L S organized school participation, analyzed the video record, and helped write the paper.

References

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